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Comments from the December 12, 2012 Mobile Broadband measurement meeting and webex

Re: Measuring Broadband America Program, GN Docket No. 12-264

Not listed in measured parameters on the slides from the SamKnows presentation is *GPS lock*. I think I heard this mentioned by someone distant from microphone. Some measurements will be taken by the application while the handset is indoors where it will have impaired access to its cellular network. Whether a handset has a lock on satellites can serve as a proxy for indoor/outdoor location. Knowing GPS state is thus valuable even without knowing the handset's coordinates. If unidentified indoor measurements are permitted into the data base, it will be difficult to know whether we are measuring the cellular performance or the effective deployment of low emissivity window glass.

James Miller encouraged participants to describe use cases for mobile broadband performance data and whether they will be served by the proposed measurement program.

As I identified during the meeting, if connected tower ID is used as a proxy for handset location, no information can be collected about areas so remote that they are not connected to a tower. It was suggested that, perhaps, different rules for disclosing GPS location might be used in these remote areas. It is hard to evaluate a proposal without something more specific. But this sounds hokey.

Another use case for mobile broadband performance measurement is to evaluate the suitability of the services as replacements for wireline broadband in remote areas where the costs to build out are high. Carriers have indicated in public statements that their broadband coverage plan for rural areas will be LTE-based. AT&T's President & Chief Executive Officer -- Mobility, Ralph de la Vega proposed on Nov 7: "in locations without access to high speed Internet" "the AT&T wireless network [can be used] instead of a land line connection" as a broadband alternative. If a tall tower covers a heavily traveled roadway, the largest number of measurements will come from highway travelers. To impute the coverage received along the highway to other areas within range of the tower would lead to a assumption that broadband coverage works as well for the rural users as it does along the highway. The tower location averaging as proposed will overwhelm rural reports from the larger number of measurements along the roadway.

The National Broadband Plan's recommendation 4.2 offers a resolution objective for broadband availability and performance information at the census block level. Spatial averaging to a much coarser grid will not meet that objective.

There is another form of privacy-preserving averaging that would preserve spatial accuracy. If the date of observations was withheld from the reported or recorded data, that would provide a large forest in which to hide individual subscriber measurements. Handsets might accumulate data for a month and report it in a block. Each measurement would have a time mark that included the hour but excluded the day. This would permit examination of performance data for diurnal patterns indicative of network congestion. Data would be attributed to the month in which it was collected so that long term trends could be observed.